

Appl. No. 09/949,461
Supplemental Amendment Dated 05/20/2004

IN THE CLAIMS

Please cancel claims 23-36 without prejudice.

Please add new claims 120-133 that follow below.

MARKED UP VERSION OF ENTIRE SET OF PENDING CLAIMS

1 1-36. (Cancelled)

1 37. (Previously Presented) A shielded housing formed by
2 the method comprising:
3 forming a flat pattern of the shielded housing
4 from a sheet of conductive material, the flat pattern
5 including one or more forward fingers extending from an
6 edge thereof;
7 folding the flat pattern along fold lines to form
8 flaps and sides of the shielded housing; and
9 bending the flat pattern along bend lines to form
10 the one or more forward fingers of the shielded
11 housing.

1 38. (Original) A method of assembling an opto-
2 electronic module comprising:
3 forming a shielded housing with an open end, the
4 shielded housing formed out of a sheet of conductive
5 material to provide electromagnetic radiation shielding
6 and protection of components, the shielded housing
7 including one or more fingers to couple the shielded
8 housing to ground;
9 assembling optical, electrical and optical-
10 electrical components into a chassis to form a
11 subassembly;
12 inserting the subassembly into the open end of the
13 shielded housing, the shielded housing around the
14 subassembly; and

Appl. No. 09/949,461
Supplemental Amendment Dated 05/20/2004

15 closing the open end of the shielded housing to
16 hold the subassembly and the shielded housing assembled
17 together.

1 39. (Original) The method of claim 38 wherein,
2 the shielding housing is a one-piece shielding
3 housing to protect components and to shield
4 electromagnetic radiation.

1 40. (Original) The method of claim 38 wherein,
2 the open end is a back side and the inserting
3 includes
4 inserting a front end of the subassembly into
5 the open end of the back side of the shielded
6 housing.

1 41. (Original) The method of claim 40 wherein,
2 the closing of the open end of the back side
3 includes
4 folding a left side wing and a right side
5 wing into the open end, and
6 folding a back side flap down over the open
7 end to couple to the left side wing and the right
8 side wing.

1 42. (Original) The method of claim 38 wherein,
2 the open end is a front side and the inserting
3 includes
4 inserting a rear end of the subassembly into the
5 open end of the front side of the shielded housing.

1 43. (Previously Presented) The method of claim 42
2 wherein,

Appl. No. 09/949,461

Supplemental Amendment Dated 05/20/2004

3 the closing of the open end of the front side
4 includes
5 folding a strap and a septum of the shielded
6 housing, the strap folded across the open end to
7 strap the subassembly into the shielded housing,
8 the septum folded into the open end to couple to
9 the bottom side of the shielded housing to hold
10 the subassembly strapped into the shielded
11 housing.

1 44. (Previously Presented) The method of claim 38
2 wherein,
3 the forming of the shielded housing includes
4 stamping a pattern of the shielded housing
5 into the sheet of conductive material, the pattern
6 including the one or more fingers near an edge of
7 the flat sheet,
8 folding the sheet of conductive material
9 along a plurality of fold lines into a multi-sided
10 rectangularly shaped container but for the open
11 end, and
12 bending the one or more fingers into shape.

1 45. (Previously Presented) An opto-electronic module
2 formed by the method comprising:
3 forming a shielded housing with an open end, the
4 shielded housing formed out of a sheet of conductive
5 material to provide electromagnetic radiation shielding
6 and protection of components, the shielded housing
7 including one or more forward fingers extending from an
8 edge to couple the shielded housing to ground;
9 assembling optical, electrical and optical-
10 electrical components into a chassis to form a
11 subassembly;

Appl. No. 09/949,461

Supplemental Amendment Dated 05/20/2004

12 inserting the subassembly into the open end of the
13 shielded housing, the shielded housing around the
14 subassembly; and
15 closing the open end of the shielded housing to
16 hold the subassembly and the shielded housing assembled
17 together.

1 46-63. (Cancelled)

1 64. (Original) A method to assemble an EMI shielding
2 module comprising:
3 forming a plurality of substantially equidistant
4 spring fingers along an edge of a flat sheet;
5 forming a strap at the edge of the flat sheet and
6 a septum on the end of the strap;
7 forming a pair of bottom flaps in the flat sheet;
8 folding the flat sheet along axes to form a
9 container substantially in the shape of rectangular
10 box, the rectangular box having a first end and a
11 second end, the first end having the plurality of
12 fingers along each of a plurality of edges and an
13 opening for cable connectors, the second end having a
14 backside flap;
15 folding the strap across the opening for cable
16 connectors; and
17 coupling the septum to inner surfaces of the
18 bottom flaps to hold the strap across the opening.

1 65. (Original) The method of claim 64 wherein,
2 the EMI shielding module is a one-piece shielded
3 housing to protect components and to shield
4 electromagnetic radiation.

Appl. No. 09/949,461

Supplemental Amendment Dated 05/20/2004

1 66. (Original) The method of claim 64 wherein,
2 the EMI shielding module encloses a module chassis
3 frame, the module chassis frame being a central
4 structural support to which one or more optical,
5 electrical and optical-electrical components used in
6 transmission and reception of optical signals are
7 attached.

1 67-76. (Cancelled)

1 77. (Original) A method to assemble an optical
2 transmitter and/or receiver, the method comprising:
3 forming a plurality of fingers, a strap, and a
4 septum along a first edge of a conductive sheet;
5 placing the conductive sheet on a module chassis
6 frame, the module chassis frame having a plurality of
7 components used in transmitting and/or receiving
8 optical signals;
9 folding the conductive sheet around the module
10 chassis frame such that the conductive sheet
11 substantially encloses the module chassis frame but for
12 a frontal opening adjacent to the first edge.

1 78. (Original) The method of claim 77 further
2 comprising:
3 bending the strap and the septum around a front
4 end of the module chassis frame to hold the folded
5 conductive sheet and the module chassis frame together.

1 79. (Original) The method of claim 77 wherein,
2 the fingers to electrically ground the folded
3 conductive sheet to a ground of a host system.

Appl. No. 09/949,461

Supplemental Amendment Dated 05/20/2004

1 80. (Original) The method of claim 77 wherein,
2 the conductive sheet is one of metal, conductive
3 plastic, and plated plastic.

1 81. (Original) The method of claim 77 further
2 comprising:
3 bending the plurality of fingers outward from the
4 frontal opening.

1 82. (Original) The method of claim 77 further
2 comprising:
3 lifting the plurality of fingers up from an outer
4 surface of the conductive sheet.

1 83-94. (Cancelled)

1 95. (Previously Presented) The shielded housing of claim
2 37 wherein,
3 the shielding housing is a one-piece shielded
4 housing to protect components and to shield
5 electromagnetic radiation.

1 96. (Previously Presented) The shielded housing of claim
2 37 wherein,
3 prior to the folding and the bending,
4 placing the flat pattern onto a chassis including
5 an opto-electronic device to process optical and
6 electrical signals, and
7 the folding and the bending of the flat pattern is
8 around the chassis to assemble the chassis and the
9 shielded housing together.

Appl. No. 09/949,461
Supplemental Amendment Dated 05/20/2004

1 97. (Previously Presented) The shielded housing of claim
2 37 wherein,
3 the folding and the bending of the flat pattern
4 substantially forms the shielded housing but for a
5 front opening, and
6 the method further includes
7 performing final folding and final bending of a
8 strap and a septum to close the front opening.

1 98. (Previously Presented) The shielded housing of claim
2 37 wherein,
3 the folding and the bending of the flat pattern
4 substantially forms the shielded housing but for a rear
5 opening, and
6 the method further includes
7 performing final folding and final bending of a
8 back side flap to close the rear opening.

1 99. (Previously Presented) The shielded housing of claim
2 37 wherein,
3 the flat pattern further includes a pair of tangs,
4 a pair of tang window openings, a strap, and a septum.

1 100. (Previously Presented) The shielded housing of claim
2 37 wherein,
3 the folding and the bending forms the shielded
4 housing including
5 a top side,
6 a first left side flap including a left wing flap,
7 a first right side flap including a right wing
8 flap,

Appl. No. 09/949,461

Supplemental Amendment Dated 05/20/2004

- 9 a second left side flap including a bottom left
10 side flap,
11 a second right side flap including a bottom right
12 side flap, and
13 a back side flap including a retaining flap.

- 1 101. (Previously Presented) The shielded housing of claim
2 100 wherein,
3 the back side flap includes a pair of tangs,
4 the left wing flap includes a tang window opening
5 to mate with one of the pairs of tangs, and
6 the right wing flap includes a tang window opening
7 to mate with one of the pairs of tangs.

- 1 102. (Previously Presented) The shielded housing of claim
2 101 wherein,
3 a strap extends from a front edge of the top side
4 at one end,
5 and a septum extends at an opposite end of the
6 strap.

- 1 103. (Previously Presented) The shielded housing of claim
2 100 wherein,
3 the one or more forward fingers extend from a
4 front edge of the top side, the second left side flap,
5 the second right side flap, the bottom left side flap,
6 and the bottom right side flap.

- 1 104. (Previously Presented) The shielded housing of claim
2 37 wherein,
3 the one or more forward fingers to couple to a
4 host panel to ground the shielded housing and to seal

Appl. No. 09/949,461
Supplemental Amendment Dated 05/20/2004

5 around an opening in the host panel to avoid
6 electromagnetic radiation leaking out therefrom.

1 105. (Previously Presented) The shielded housing of claim
2 37 wherein,
3 the flat pattern is formed by etching the sheet of
4 conductive material.

1 106. (Previously Presented) The shielded housing of claim
2 37 wherein,
3 the flat pattern is by formed stamping the sheet
4 of conductive material.

1 107. (Previously Presented) The shielded housing of claim
2 37 wherein,
3 the flat pattern is formed by cutting the sheet of
4 conductive material.

1 108. (Previously Presented) The opto-electronic module of
2 claim 45 wherein,
3 the shielding housing is a one-piece shielding
4 housing to protect components and to shield
5 electromagnetic radiation.

1 109. (Previously Presented) The opto-electronic module of
2 claim 45 wherein,
3 the open end is a back side and the inserting
4 includes
5 inserting a front end of the subassembly into
6 the open end of the back side of the shielded
7 housing.

Appl. No. 09/949,461
Supplemental Amendment Dated 05/20/2004

1 110. (Previously Presented) The opto-electronic module of
2 claim 109 wherein,
3 the closing of the open end of the back side
4 includes
5 folding a left side wing and a right side
6 wing into the open end, and
7 folding a back side flap down over the open
8 end to couple to the left side wing and the right
9 side wing.

1 111. (Previously Presented) The opto-electronic module of
2 claim 45 wherein,
3 the open end is a front side and the inserting
4 includes
5 inserting a rear end of the subassembly into the
6 open end of the front side of the shielded housing.

1 112. (Previously Presented) The opto-electronic module of
2 claim 111 wherein,
3 the closing of the open end of the front side
4 includes
5 folding a strap and a septum of the shielded
6 housing, the strap folded across the open end to
7 strap the subassembly into the shielded housing,
8 the septum folded into the open end to couple to
9 the bottom side of the shielded housing to hold
10 the subassembly strapped into the shielded
11 housing.

1 113. (Previously Presented) The opto-electronic module of
2 claim 45 wherein,
3 the forming of the shielded housing includes

Appl. No. 09/949,461

Supplemental Amendment Dated 05/20/2004

4 stamping a pattern of the shielded housing
5 into the sheet of conductive material, the pattern
6 including the one or more forward fingers
7 extending from the edge of the sheet,
8 folding the sheet of conductive material
9 along a plurality of fold lines into a multi-sided
10 rectangularly shaped container but for the open
11 end, and
12 bending the one or more forward fingers into
13 shape.

1 114. (Previously Presented) An optical transmitter and/or
2 receiver formed by the method comprising:
3 forming a plurality of fingers, a strap, and a
4 septum along a first edge of a conductive sheet;
5 placing the conductive sheet on a module chassis
6 frame, the module chassis frame having a plurality of
7 components used in transmitting and/or receiving
8 optical signals;
9 folding the conductive sheet around the module
10 chassis frame such that the conductive sheet
11 substantially encloses the module chassis frame but for
12 a frontal opening adjacent to the first edge.

1 115. (Previously Presented) The optical transmitter and/or
2 receiver of claim 114 formed by the method further
3 comprising:
4 bending the strap and the septum around a front
5 end of the module chassis frame to hold the folded
6 conductive sheet and the module chassis frame together.

1 116. (Previously Presented) The optical transmitter and/or
2 receiver of claim 114 wherein,

Appl. No. 09/949,461

Supplemental Amendment Dated 05/20/2004

3 the fingers to electrically ground the folded
4 conductive sheet to a ground of a host system and to
5 seal an opening in a host panel of the host system to
6 avoid electromagnetic radiation leaking out through the
7 opening in the host panel.

1 117. (Previously Presented) The optical transmitter and/or
2 receiver of claim 114 wherein,
3 the conductive sheet is one of metal, conductive
4 plastic, and plated plastic.

1 118. (Previously Presented) The optical transmitter and/or
2 receiver of claim 114 formed by the method further
3 comprising:
4 bending the plurality of fingers outward from the
5 frontal opening to form a plurality of forward fingers
6 extending out therefrom.

1 119. (Previously Presented) The optical transmitter and/or
2 receiver of claim 114 formed by the method further
3 comprising:
4 lifting the plurality of fingers up from an outer
5 surface of the conductive sheet to form a plurality of
6 backward fingers.

1 120. (New) A method of forming a shielded housing for a
2 fiber-optic module, the method comprising:
3 forming a flat pattern of the shielded housing
4 from a sheet of conductive material, the flat pattern
5 including one or more fingers;
6 folding the flat pattern along fold lines to form
7 flaps and sides of the shielded housing; and

Appl. No. 09/949,461

Supplemental Amendment Dated 05/20/2004

8 bending the flat pattern along bend lines to form
9 the one or more fingers of the shielded housing.

1 121. (New) The method of claim 120, wherein
2 the shielding housing is a one-piece shielded
3 housing to protect components and to shield
4 electromagnetic radiation.

1 122. (New) The method of claim 120, wherein
2 prior to the folding and the bending,
3 placing the flat pattern onto a chassis including
4 an opto-electronic device to process optical and
5 electrical signals, and
6 the folding and the bending of the flat pattern is
7 around the chassis to assemble the chassis and the
8 shielded housing together.

1 123. (New) The method of claim 120, wherein
2 the folding and the bending of the flat pattern
3 substantially forms the shielded housing but for a
4 front opening, and
5 inserting a rear of a chassis including an opto-
6 electronic device to process optical and electrical
7 signals into the front opening in the shielded housing,
8 and
9 performing final folding and final bending to the
10 front opening to assemble the chassis and the shielded
11 housing together.

1 124. (New) The method of claim 120, wherein
2 the folding and the bending of the flat pattern
3 substantially forms the shielded housing but for a rear
4 opening, and

Appl. No. 09/949,461

Supplemental Amendment Dated 05/20/2004

5 inserting a front of a chassis including an opto-
6 electronic device to process optical and electrical
7 signals into the rear opening in the shielded housing,
8 and
9 performing final folding and final bending to the
10 rear opening to assemble the chassis and the shielded
11 housing together.

1 125. (New) The method of claim 120, wherein
2 the flat pattern further includes a pair of tangs,
3 a pair of tang window openings, a strap, and a septum.

1 126. (New) The method of claim 120, wherein
2 the folding and the bending forms the shielded
3 housing including
4 a top side,
5 a first left side flap including a left wing flap,
6 a first right side flap including a right wing
7 flap,
8 a second left side flap including a bottom left
9 side flap,
10 a second right side flap including a bottom right
11 side flap, and
12 a back side flap including a retaining flap.

1 127. (New) The method of claim 126, wherein
2 the back side flap includes a pair of tangs,
3 the left wing flap includes a tang window opening
4 to mate with one of the pairs of tangs, and
5 the right wing flap includes a tang window opening
6 to mate with one of the pairs of tangs.

1 128. (New) The method of claim 127, wherein

Appl. No. 09/949,461

Supplemental Amendment Dated 05/20/2004

2 a strap extends from a front edge of the top side
3 at one end,
4 and a septum extends at an opposite end of the
5 strap.

1 129. (New) The method of claim 126, wherein
2 the one or more fingers extend from a front edge
3 of the top side, the second left side flap, the second
4 right side flap, the bottom left side flap, and the
5 bottom right side flap.

1 130. (New) The method of claim 126, wherein
2 the one or more fingers extend backward near a
3 front edge from a surface of the top side, the second
4 left side flap, the second right side flap, the bottom
5 left side flap, and the bottom right side flap.

1 131. (New) The method of claim 126, wherein
2 the forming of the flat pattern is by etching the
3 sheet of conductive material.

1 132. (New) The method of claim 126, wherein
2 the forming of the flat pattern is by stamping the
3 sheet of conductive material.

1 133. (New) The method of claim 126, wherein
2 the forming of the flat pattern is by cutting the
3 sheet of conductive material.